ASSESSMENT OF CONSTRUCTION PLANNING OF NEW PROJECT: MEDAN IKAN BAKAR CASE STUDY

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SUPERVISOR'S DECLARATION

I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the Bachelor Degree of Civil Engineering

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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ABSTRAK

Projek pembinaan dianggap berjaya apabila dapat diselesai pada masa yang dijadualkan, mengikut kos yang dianggarkan, dan menepati spesifikasi kualiti yang ditetapkan. Semasa pelaksanaan projek, kelewatan dalam menyiapkan projek adalah merupakan satu kegagalan yang biasanya berlaku dalam industri pembinaan, yang menyebabkan pelanjutan masa di mana projek itu tidak dapat diselesaikan mengikut perancangan. Objektif utama kajian ini adalah memberi tumpuan kepada penilaian perancangan pembinaan projek baru Medan Ikan Bakar. Pelan perancangan sedia ada projek Medan Ikan Bakar telah dianalisis dan didapati bahawa terdapat kelewatan berlaku semasa pelaksanaan projek. Hal yang demikian, pelan perancangan semula bagi projek Medan Ikan Bakar telah dilaksanakan dengan mempertimbangkan bilangan hari hujan dan juga cuti umum. Oleh itu, bilangan hari bekerja yang optimum dapat diperolehi dan projek juga dapat diselesaikan mengikut perancangan supaya pengguna tidak akan menghadapi kerugian dari segi penggunaan atas kelewatan penyiapan projek tersebut yang tidak mengikut tempoh masa yang telah ditetapkan. Selepas memperoleh hari kerja yang optimum dalam perancangan pembinaan, beberapa cadangan dapat diwujudkan untuk pembangunan strategi dengan tujuan untuk memperbaiki amalan perancangan pembinaan dan boleh menjadi garis panduan untuk kajian masa hadapan dalam merancang projek pembinaan.

ABSTRACT

A construction project is commonly acknowledged as successful when it is completed on time, within budget, in accordance with specifications and to stakeholder satisfaction. During the project execution, delay in the project is one of the failures that usually occurred in the construction industry, which leads to extension of time where the project cannot be completed according to the plan. The objective of this study was focused on assessment of construction planning of new project Medan Ikan Bakar. The existing plan of the Medan Ikan Bakar project is analysed and it has been identified that the delay was occurred during the project execution. Due to the extension of time that occurred in the project, the reschedule plan of the Medan Ikan Bakar project is carried out by considering the number of rainy days and the public holidays. Hence, the optimum working days is obtained and the project could be completed according to the plan so that the users may not face the lost in the term of the operation of the building where the completed project is beyond the expected date. After acquiring the optimum working days in construction planning, several suggestions could be created for the development of strategies with the purpose in improving construction planning practices and can be as a guideline for future study in planning the construction project.

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GDP	Gross Domestic Product
MYR	Malaysia Ringgit
MP	Malaysia Plan
JKR	Jabatan Kerja Raya
PLC	Project Life Cycle
RMP	Risk Management Plan
RM	Risk Management
P-I	Probability-Impact

CHAPTER 1

INTRODUCTION

1.1 Introduction

Construction industry plays very important role and known as highly dynamic sector in the development of country in Malaysia. The industry is a distinct sector of the economy which makes its direct contribution to economic growth like all the other sectors such as agriculture, manufacturing and services. It is a vital contributor to the gross domestic product (GDP) growth and produces the built environment that supports other sectors of the economy in most part of the world (Oladapo, 2015; NELF, 2013). According to the Department of Statistics, Malaysia (2017), GDP From Construction in Malaysia increased to 13838 MYR Million in the third quarter of 2017 from 12892 MYR Million in the second quarter of 2017. GDP from Construction in Malaysia averaged 10038.16 MYR Million from 2010 until 2017, reaching an all-time high of 13838 MYR Million in the third quarter of 2017 and a record low of 6464 MYR Million in the first quarter of 2010.

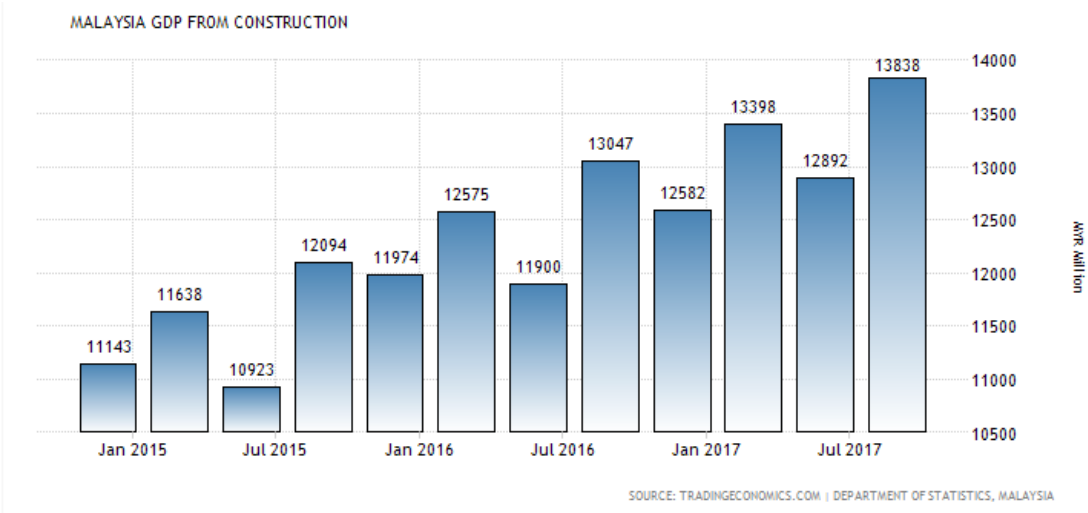

Figure 1.1 Malaysia GDP from Construction

In GDP of construction in Malaysia, Malaysia Plan are one of the biggest contribution towards the economic growth for the construction sector. Based on the Malaysia Plan report, the construction sector is growing rapidly from year to year with the increasing number of projects awarded in Malaysian Plan. In 9th Malaysia Plan (9MP), Kementerian Kerja Raya constructing 542 projects for road and buildings and its rose to 5095 projects in 10th Malaysia Plan (10MP) with the increasing amount allocated for all the projects from 21.47 MYR Billion to 470 MYR Billion.

Based on 9MP and 10MP, not all of the projects are completed according to the Malaysia Plan. In 9MP, there are consists of 221 numbers of projects that are facing delay issue which cannot be completed due to several factors while in 10MP, the same issue happened where 770 projects by JKR are delayed. For instance in 2006 under 9MP, Putrajaya was forced to spend an extra RM800 million to build the East Coast Highway largely due to delays by the Public Works' Department (JKR)'s contractors.

According to the audit, JKR had performed poorly in its task to build roads measuring 139.4km in total for the highway's second phase, with the government department missing both its March 2009 deadline and RM2.09 billion budget. Other factors that contributed to the higher cost included the hike in building materials' prices and additional facilities. The cost was mainly due to the increase of construction materials that caused the tender prices for the re-tendering of a few packages to rise drastically. Other factors that contributed to the cost increase is the additional payment for land acquisition, increase of design costs and security, the construction of toll plazas and additional components (Malay Mail Online, 2013).

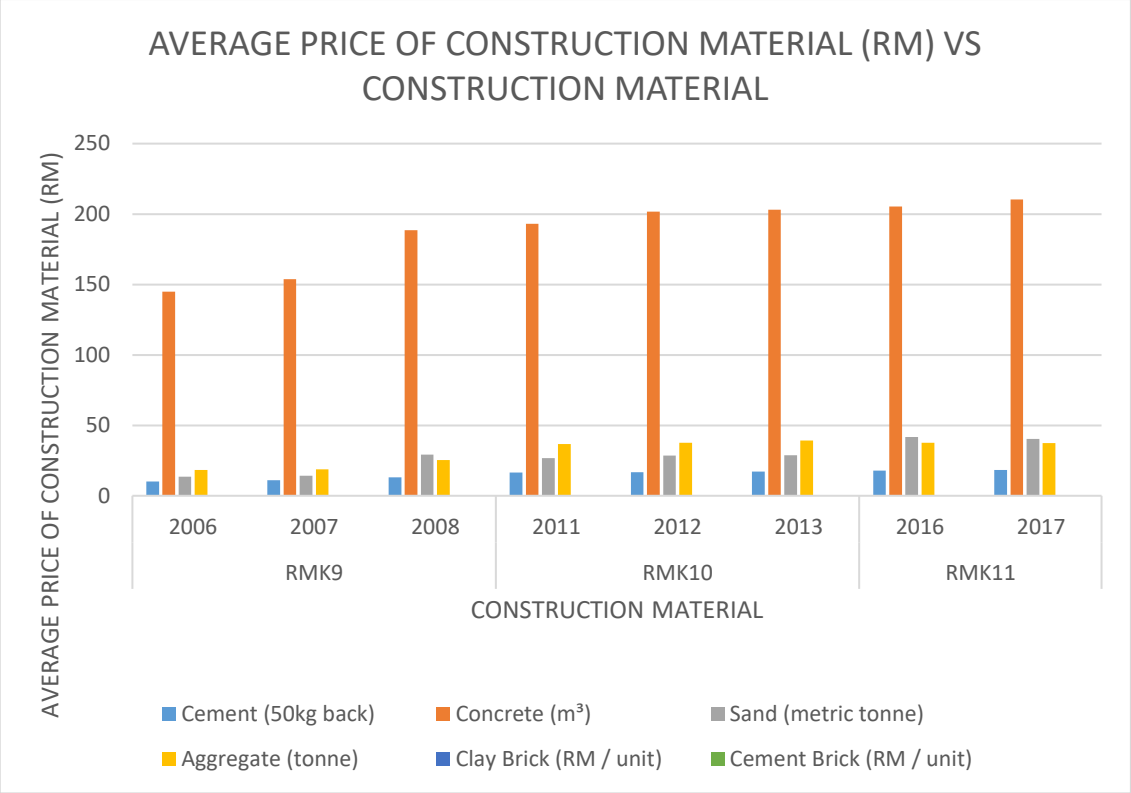

Figure 1.2 Average price of construction material

Based on the Figure 1.2 provided above, it is proven that building material's prices is one of the factor contribution towards the delay occurred in East Coast Highway project. This can be seen from the graph where the price for concrete rose by years from 145 MYR in 2006 of 9MP to 210 MYR in 2017 of 11MP. Besides that, there are also another factors that may leads to delay in construction project.

Table 1.1 Factors of delay in project

No	Factors of delay in project	Critical	Not critical
1	**General**		
	1.1 Weather	√	-
	1.2 Poor planning of work execution	√	-
	1.3 Poor facilities at construction site	-	√
	1.4 Natural disaster	-	√
2	**Lack of Labours**		
	2.1 Professional management	√	-
	2.2 Skilled workers	√	-

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